

OCD-ARTESIA

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

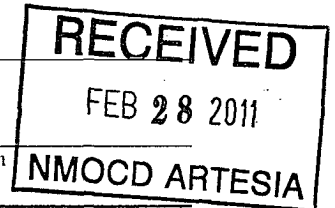
UNORTHODOX
LOCATION

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

EA 221
SHL: NM 012121
NMNM-01221; NMNM036379 BHL

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		7. If Unit or CA Agreement, Name and No.	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		8. Lease Name and Well No. Cotton Draw Unit 156H	
2. Name of Operator Devon Energy Production Company, LP		9. API Well No. 30-015-38557	
3a. Address 20 North Broadway Oklahoma City, Oklahoma City 73102-8260	3b. Phone No. (include area code) 405-228-8699	10. Field and Pool, or Exploratory Poker Lake BLM Delaware South ME	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface NE/4 NE/4 200 FNL & 660 FEL UNIT A At proposed prod. zone SE/4 SE/4 200 FSL & 660 FEL UNIT P PP: 200 FNL & 660 FEL		11. Sec., T. R. M. or Blk. and Survey or Area SEC 35 T24S R31E	
14. Distance in miles and direction from nearest town or post office* Approximately 20 miles east of Loving, NM.		12. County or Parish Eddy County Lea	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 200'	16. No. of acres in lease 1280 Acres	17. Spacing Unit dedicated to this well 160 Acres	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. See attached map.	19. Proposed Depth 12,878' MD 8280' TVD	20. BLM/BIA Bond No. on file CO-1104	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3492' GL	22. Approximate date work will start*	23. Estimated duration 45 days	



24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- | | |
|---|--|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) Judy A. Barnett	Date 11/23/2010
Title Regulatory Analyst		

Approved by (Signature) /s/ Linda S.C. Rundiell	Name (Printed/Typed)	Date FEB 16 2011
Title STATE DIRECTOR	Office NM STATE OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on page 2)

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

CARLSBAD CONTROLLED WATER BASIN

US

DRILLING PROGRAM

Devon Energy Production Company, LP

Cotton Draw Unit 156H

Surface Location: 200' FNL & 660' FEL, Unit A, Sec 35 T24S R31E, Eddy, NM

Bottom Hole Location: 200' FSL & 660' FEL, Unit P, Sec 35 T24S R31E, Eddy, NM

1. **Geologic Name of Surface Formation**

a. Quaternary

2. **Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:**

a. Rustler	678'	
b. Salt	1118'	
c. Base of Salt	4153'	
d. Delaware/Lamar	4385'	
e. Bell Canyon	4416'	Oil
f. Cherry Canyon	5374'	Oil
g. Brushy Canyon	6729'	Oil
h. Total Depth	12,878'	

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 17 1/2" casing at 750' and circulating cement back to surface. Fresh water sands will be protected by setting 9 5/8" casing at 4375' and circulating cement to surface. The Delaware intervals will be isolated by setting 5 1/2" casing to total depth and circulating cement above the base of the 9 5/8" casing.

Casing Program:

see COA

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
17 1/2"	0 - 750'	13 3/8"	0'-750'	48#	STC	H-40
12 1/4"	750-4375'	9 5/8"	0'-4375'	40#	LTC	J-55
8 3/4"	4375-7500'	5 1/2"	0-7500'	17#	LTC	N-80
8 3/4"	7500-12878'	5 1/2"	7500-12,878'	17#	BTC	N-80
			5378'			

Design Parameter Factors:

<u>Casing Size</u>	<u>Collapse Design</u>	<u>Burst Design</u>	<u>Tension Design</u>
	<u>Factor</u>	<u>Factor</u>	<u>Factor</u>
13 3/8"	2.35	5.28	9.58
9 5/8" 40#	1.23	1.70	2.91
5 1/2" 17#	1.79	2.21	1.60
5 1/2" 17#	1.56	1.92	4.95

Cement Program:

13 3/8"

Lead: 600 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 4% bwoc Bentonite + 81.4% Fresh Water, 13.5 ppg **Yield:** 1.75 cf/sk **TOC @ surface**
Tail: 250 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water, 14.8 ppg **Yield:** 1.35 cf/sk

9 5/8" Intermediate

Lead: 1,200 sacks (35:65) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 107.8% Fresh Water, 12.5 ppg **Yield:** 2.04 cf/sk **TOC @ surface**
Tail: 300 sacks (60:40) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 64.7% Water, 13.8 ppg **Yield:** 1.37 cf/sk

5 1/2" Production

1st Stage

Lead: 500 sacks (35:65) Poz (Fly Ash):Class H Cement + 5% bwow Sodium Chloride + 0.3% bwoc CD-32 + 0.5% bwoc FL-25 + 2% bwoc Bentonite + 0.6% bwoc Sodium Metasilicate + 0.5% bwoc FL-52A + 102.5% Fresh Water, 12.5 ppg **Yield:** 2.01 cf/sk
Tail: 1,400 sacks (50:50) Poz (Fly Ash):Class H Cement + 1% bwow Sodium Chloride + 0.2% bwoc R-3 + 0.125 lbs/sack Cello Flake + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 58.3% Fresh Water, 14.2 ppg **Yield:** 1.28 cf/sk
DV TOOL at 6,000'

2nd Stage

Lead: 350 sacks Class C Cement + 1% bwow Calcium Chloride + 0.125 lbs/sack Cello Flake + 157.8% Fresh Water, 11.4 ppg **Yield:** 2.88 cf/sk
Tail: 100 sacks (60:40) Poz (Fly Ash):Class C Cement + 1% bwow Sodium Chloride + 0.2% bwoc R-3 + 0.125 lbs/sack Cello Flake + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 63.2% Fresh Water, 13.8 ppg **Yield:** 1.37cf/sk
TOC @ 3,875'

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach approximately 500' above the 9 5/8" casing shoe. All casing is new and API approved.

Pressure Control Equipment BOP DESIGN:

The BOP system used to drill the intermediate hole will consist of a 13-5/8" 3M Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a **3M system** prior to drilling out the surface casing shoe.

The BOP system used to drill the production hole will consist of a 13-5/8" 3M Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a **3M system** prior to drilling out the intermediate casing shoe.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP. Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns. See attached.

Proposed Mud Circulation System

See COA *

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>
0' - 750'	8.4-9.0	30-34	NC	FW
750' - 4375'	9.8-10.0	28-32	NC	Brine
4375' - 12,878'	8.6-9.0	28-32	NC	FW

The necessary mud products for weight addition and fluid loss control will be on location at all times.

3. Auxiliary Well Control and Monitoring Equipment:

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times
- Hydrogen Sulfide detection equipment will be in operation after drilling out the 20" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 20" shoe until total depth is reached.

4. * Logging, Coring, and Testing Program:

- See COA
- Drill stem tests will be based on geological sample shows.
 - If a drill stem test is anticipated; a procedure, equipment to be used and safety measures will be provided via sundry notice to the BLM.

c. The open hole electrical logging program will be:

- i. Total Depth to Intermediate Casing Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
- ii. Total Depth to Surface Compensated Neutron with Gamma Ray
- iii. No coring program is planned
- iv. Additional testing will be initiated subsequent to setting the 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

5. Potential Hazards:

- a. No abnormal pressures or temperatures are expected. There is no known presence of H₂S in this area. If H₂S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6 No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 4405 psi and Estimated BHT 145°. No H₂S is anticipated to be encountered.

6. Anticipated Starting Date and Duration of Operations:

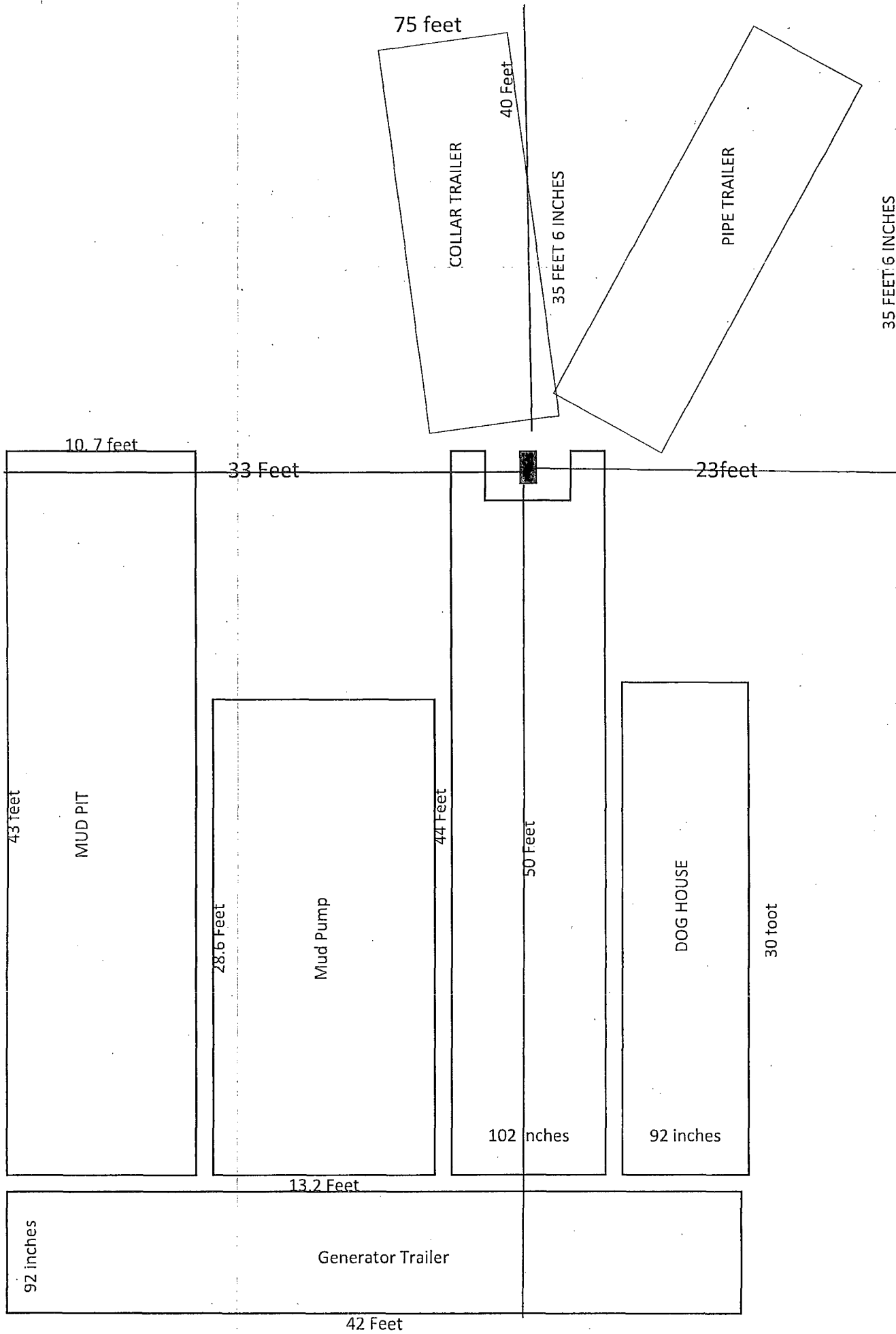
- a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 32 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

7.

Depending on rig availability, Devon may set the surface casing using an Ashton Oilfield Services rig. The rig plat is attached. This rig will be used only to set the surface casing and will leave the location once the surface casing has been run and cemented. Another rig will drill the remainder of the wellbore. The reasons for using the smaller rig to set surface are: rig availability and economics.

The BLM will be contacted 24 hours prior to commencing drilling operations. The surface casing will be run and cemented back to surface as per the approved APD. The well will be secured with a cap welded onto the surface casing. Another rig will be on location to drill the remainder of the wellbore within 60 days after the Ashton rig has left the location.

95 FEET



CAROLINE #1



Weatherford®

Drilling Services

Proposal



devon

COTTON DRAW UNIT #156H

EDDY COUNTY, NM

WELL FILE: PLAN 1

NOVEMBER 12, 2010

Weatherford International, Ltd.

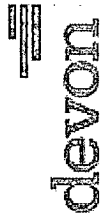
P.O. Box 61028

Midland, TX 79711 USA

+1.432.561.8892 Main

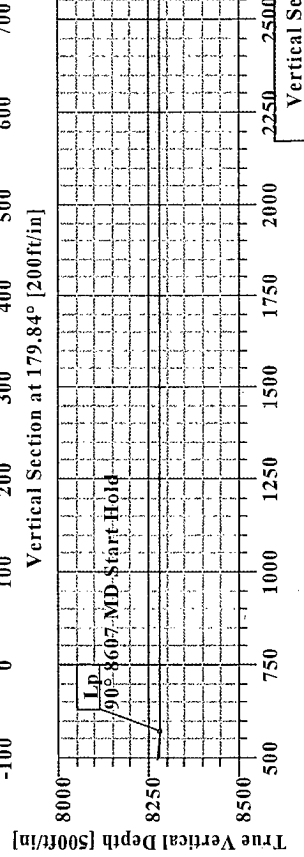
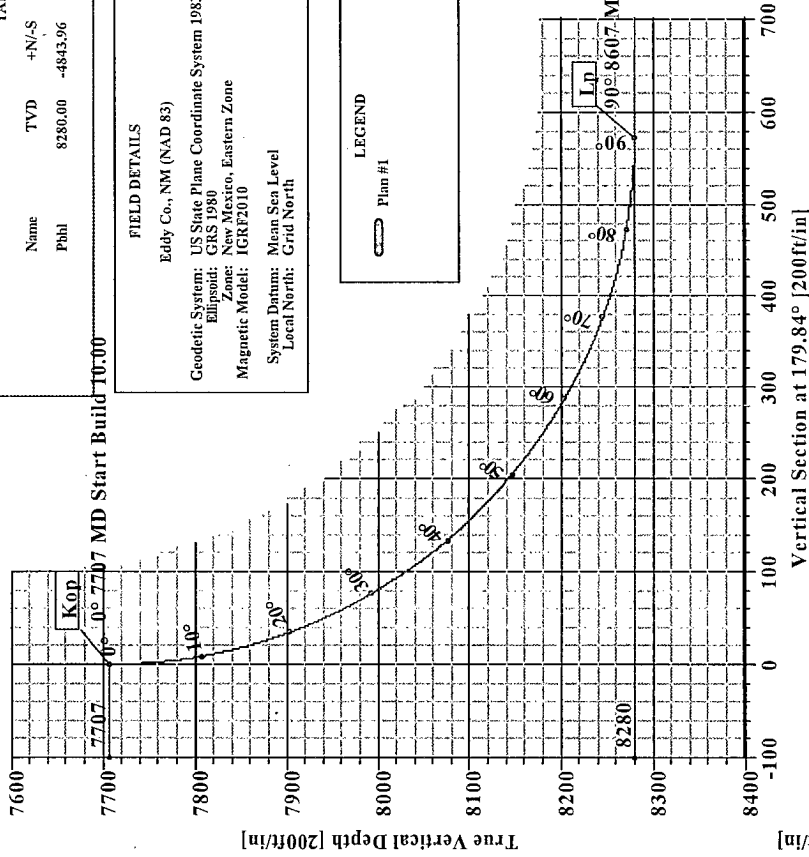
+1.432.561.8895 Fax

www.weatherford.com



Cotton Draw Unit #156H Eddy Co., NM

KB ELEV: 3518
GL ELEV: 3493



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	179.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7707.04	0.00	179.84	7707.04	0.00	0.00	0.00	0.00	0.00	0.00
3	8607.04	90.00	179.84	8280.00	-572.96	1.57	10.00	179.84	572.96	Pbhl
4	12878.06	90.00	179.84	8280.00	-4843.96	13.26	0.00	0.00	4843.96	Pbhl

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Cotton Draw Unit #156H	0.00	0.00	429865.83	724237.32	32°10'49.422N	103°44'31.776W	N/A

TARGET DETAILS

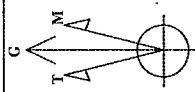
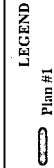
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape	Point
Pbhl	8280.00	-4843.96	13.26	425021.87	724250.58		

FIELD DETAILS

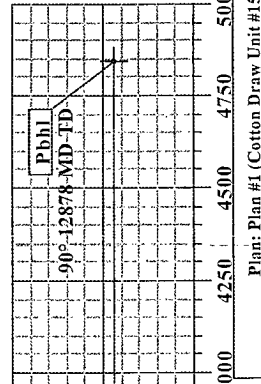
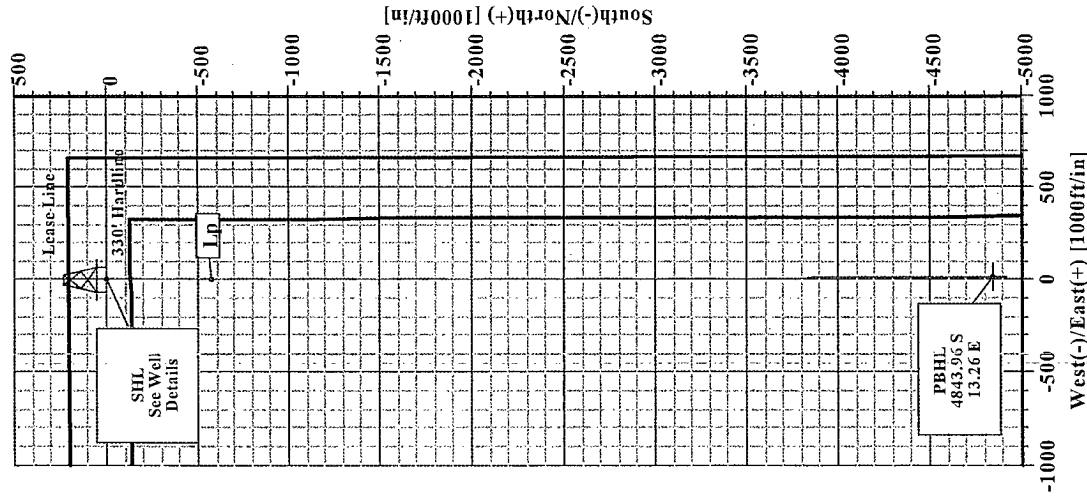
Eddy Co., NM (NAD 83)
Geodetic System: US State Plane Coordinate System 1983
Datum: GRS 1980
Zone: New Mexico, Eastern Zone
Magnetic Model: IGRF2010
System Datum: Mean Sea Level
Local North: Grid North

SITE DETAILS

Cotton Draw Unit #156H
Site Centre Northing: 429865.83
Easting: 724237.32
Ground Level: 3493.00
Positional Uncertainty: 0.00
Convergence: 0.31



Azinuths to Grid North
True North: -0.3° E
Magnetic North: 7.36° E
Magnetic Field
Strength: 48600 nT
Declination: 60.12°
Date: 5/15/2011
Model: IGRF2010
Total Correction to Grid North: 7.36°



Plan: Plan #1 (Cotton Draw Unit #156H/1)

Created By: Russell W. Joyner

Date: 11/12/2010



Weatherford International Ltd.

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy	Date: 11/12/2010	Time: 08:16:52	Page: 1
Field: Eddy Co., NM (NAD 83)	Co-ordinate(NE) Reference:	Well: Cotton Draw Unit #156H, Grid North	
Site: Cotton Draw Unit #156H	Vertical (TVD) Reference:	SITE 3518.0	
Well: Cotton Draw Unit #156H	Section (VS) Reference:	Well (0.00N,0.00E,179.84Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Plan: Plan #1	Date Composed: 11/12/2010
Principal: Yes	Version: 1
	Tied-to: From Surface

Field: Eddy Co., NM (NAD 83)

Map System: US State Plane Coordinate System 1983
Geo Datum: GRS 1980
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
Coordinate System: Well Centre
Geomagnetic Model: IGRF2010

Site: Cotton Draw Unit #156H

Site Position:	Northing: 429865.83 ft	Latitude: 32 10 49.422 N
From: Map	Easting: 724237.32 ft	Longitude: 103 44 31.776 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 3493.00 ft		Grid Convergence: 0.31 deg

Well: Cotton Draw Unit #156H

Slot Name:

Well Position: +N/-S 0.00 ft	Northing: 429865.83 ft	Latitude: 32 10 49.422 N
+E/-W 0.00 ft	Easting: 724237.32 ft	Longitude: 103 44 31.776 W
Position Uncertainty: 0.00 ft		

Wellpath: 1

Drilled From: Surface
Tie-on Depth: 0.00 ft
Above System Datum: Mean Sea Level
Declination: 7.67 deg
Mag Dip Angle: 60.12 deg
+E/-W Direction
ft deg

Current Datum: SITE	Height 3518.00 ft
Magnetic Data: 5/15/2011	
Field Strength: 48605 nT	
Vertical Section: Depth From (TVD)	+N/-S
ft	ft
8280.00	0.00

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	179.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7707.04	0.00	179.84	7707.04	0.00	0.00	0.00	0.00	0.00	0.00	
8607.04	90.00	179.84	8280.00	-572.96	1.57	10.00	10.00	0.00	179.84	
12878.06	90.00	179.84	8280.00	-4843.96	13.26	0.00	0.00	0.00	0.00	Pbhl

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
7700.00	0.00	179.84	7700.00	0.00	0.00	0.00	0.00	429865.83	724237.32	Kop
7707.04	0.00	179.84	7707.04	0.00	0.00	0.00	0.00	429865.83	724237.32	
7800.00	9.30	179.84	7799.59	-7.52	0.02	7.52	10.00	429858.31	724237.34	
7900.00	19.30	179.84	7896.37	-32.19	0.09	32.19	10.00	429833.64	724237.41	
8000.00	29.30	179.84	7987.40	-73.28	0.20	73.28	10.00	429792.55	724237.52	
8100.00	39.30	179.84	8069.91	-129.55	0.35	129.55	10.00	429736.28	724237.67	Lp
8200.00	49.30	179.84	8141.39	-199.30	0.55	199.30	10.00	429666.53	724237.87	
8300.00	59.30	179.84	8199.68	-280.40	0.77	280.40	10.00	429585.43	724238.09	
8400.00	69.30	179.84	8243.00	-370.39	1.01	370.39	10.00	429495.44	724238.33	
8500.00	79.30	179.84	8270.03	-466.54	1.28	466.54	10.00	429399.29	724238.60	
8600.00	89.30	179.84	8279.96	-565.91	1.55	565.92	10.00	429299.92	724238.87	
8607.04	90.00	179.84	8280.00	-572.96	1.57	572.96	10.00	429292.87	724238.89	
8700.00	90.00	179.84	8280.00	-665.91	1.82	665.92	0.00	429199.92	724239.14	
8800.00	90.00	179.84	8280.00	-765.91	2.10	765.92	0.00	429099.92	724239.42	
8900.00	90.00	179.84	8280.00	-865.91	2.37	865.92	0.00	428999.92	724239.69	
9000.00	90.00	179.84	8280.00	-965.91	2.64	965.92	0.00	428899.92	724239.96	
9100.00	90.00	179.84	8280.00	-1065.91	2.92	1065.92	0.00	428799.92	724240.24	



Weatherford International Ltd.

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw Unit #156H
Well: Cotton Draw Unit #156H
Wellpath: 1

Date: 11/12/2010 Time: 08:16:52 Page: 2
Co-ordinate(NE) Reference: Well: Cotton Draw Unit #156H, Grid North
Vertical (TVD) Reference: SITE 3518.0
Section (VS) Reference: Well (0.00N,0.00E,179.84Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
9200.00	90.00	179.84	8280.00	-1165.91	3.19	1165.92	0.00	428699.92	724240.51	
9300.00	90.00	179.84	8280.00	-1265.91	3.47	1265.92	0.00	428599.92	724240.79	
9400.00	90.00	179.84	8280.00	-1365.91	3.74	1365.92	0.00	428499.92	724241.06	
9500.00	90.00	179.84	8280.00	-1465.91	4.01	1465.92	0.00	428399.92	724241.33	
9600.00	90.00	179.84	8280.00	-1565.91	4.29	1565.92	0.00	428299.92	724241.61	
9700.00	90.00	179.84	8280.00	-1665.91	4.56	1665.92	0.00	428199.92	724241.88	
9800.00	90.00	179.84	8280.00	-1765.91	4.83	1765.92	0.00	428099.92	724242.15	
9900.00	90.00	179.84	8280.00	-1865.91	5.11	1865.92	0.00	427999.92	724242.43	
10000.00	90.00	179.84	8280.00	-1965.91	5.38	1965.92	0.00	427899.92	724242.70	
10100.00	90.00	179.84	8280.00	-2065.91	5.66	2065.92	0.00	427799.92	724242.98	
10200.00	90.00	179.84	8280.00	-2165.91	5.93	2165.92	0.00	427699.92	724243.25	
10300.00	90.00	179.84	8280.00	-2265.91	6.20	2265.92	0.00	427599.92	724243.52	
10400.00	90.00	179.84	8280.00	-2365.91	6.48	2365.92	0.00	427499.92	724243.80	
10500.00	90.00	179.84	8280.00	-2465.91	6.75	2465.92	0.00	427399.92	724244.07	
10600.00	90.00	179.84	8280.00	-2565.91	7.02	2565.92	0.00	427299.92	724244.34	
10700.00	90.00	179.84	8280.00	-2665.91	7.30	2665.92	0.00	427199.92	724244.62	
10800.00	90.00	179.84	8280.00	-2765.91	7.57	2765.92	0.00	427099.92	724244.89	
10900.00	90.00	179.84	8280.00	-2865.90	7.85	2865.92	0.00	426999.93	724245.17	
11000.00	90.00	179.84	8280.00	-2965.90	8.12	2965.92	0.00	426899.93	724245.44	
11100.00	90.00	179.84	8280.00	-3065.90	8.39	3065.92	0.00	426799.93	724245.71	
11200.00	90.00	179.84	8280.00	-3165.90	8.67	3165.92	0.00	426699.93	724245.99	
11300.00	90.00	179.84	8280.00	-3265.90	8.94	3265.92	0.00	426599.93	724246.26	
11400.00	90.00	179.84	8280.00	-3365.90	9.21	3365.92	0.00	426499.93	724246.53	
11500.00	90.00	179.84	8280.00	-3465.90	9.49	3465.92	0.00	426399.93	724246.81	
11600.00	90.00	179.84	8280.00	-3565.90	9.76	3565.92	0.00	426299.93	724247.08	
11700.00	90.00	179.84	8280.00	-3665.90	10.04	3665.92	0.00	426199.93	724247.36	
11800.00	90.00	179.84	8280.00	-3765.90	10.31	3765.92	0.00	426099.93	724247.63	
11900.00	90.00	179.84	8280.00	-3865.90	10.58	3865.92	0.00	425999.93	724247.90	
12000.00	90.00	179.84	8280.00	-3965.90	10.86	3965.92	0.00	425899.93	724248.18	
12100.00	90.00	179.84	8280.00	-4065.90	11.13	4065.92	0.00	425799.93	724248.45	
12200.00	90.00	179.84	8280.00	-4165.90	11.40	4165.92	0.00	425699.93	724248.72	
12300.00	90.00	179.84	8280.00	-4265.90	11.68	4265.92	0.00	425599.93	724249.00	
12400.00	90.00	179.84	8280.00	-4365.90	11.95	4365.92	0.00	425499.93	724249.27	
12500.00	90.00	179.84	8280.00	-4465.90	12.23	4465.92	0.00	425399.93	724249.55	
12600.00	90.00	179.84	8280.00	-4565.90	12.50	4565.92	0.00	425299.93	724249.82	
12700.00	90.00	179.84	8280.00	-4665.90	12.77	4665.92	0.00	425199.93	724250.09	
12800.00	90.00	179.84	8280.00	-4765.90	13.05	4765.92	0.00	425099.93	724250.37	
12878.06	90.00	179.84	8280.00	-4843.96	13.26	4843.98	0.00	425021.87	724250.58	Pbhl

Targets

Name	Description Dip.	TVD Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ----> Deg Min Sec			<--- Longitude ---> Deg Min Sec		
Pbhl			8280.00	-4843.96	13.26	425021.87	724250.58	32	10	1.488 N	103	44	31.932 W

Casing Points

MD	TVD	Diameter	Hole Size	Name



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw Unit #156H
Well: Cotton Draw Unit #156H
Wellpath: 1

Date: 11/12/2010 Time: 08:16:52 Page: 3
Co-ordinate(NE) Reference: Well: Cotton Draw Unit #156H, Grid North
Vertical (TVD) Reference: SITE 3518.0
Section (VS) Reference: Well (0.00N,0.00E,179.84Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Annotation

MD ft	TVD ft	
7707.04	7707.04	Kop
8607.04	8280.00	Lp
12878.06	8280.00	Pbhl

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

**Weatherford®****Weatherford Drilling Services**

GeoDec v5.03

Report Date: November 12, 2010
Job Number: _____
Customer: Devon Energy
Well Name: Cotton Draw Unit #156H
API Number: _____
Rig Name: _____
Location: Eddy Co, NM
Block: _____
Engineer: R Joyner

US State Plane 1983	Geodetic Latitude / Longitude
System: New Mexico Eastern Zone	System: Latitude / Longitude
Projection: Transverse Mercator/Gauss Kruger	Projection: Geodetic Latitude and Longitude
Datum: North American Datum 1983	Datum: North American Datum 1983
Ellipsoid: GRS 1980	Ellipsoid: GRS 1980
North/South 429865.830 USFT	Latitude 32.1803974 DEG
East/West 724237.320 USFT	Longitude -103.7421554 DEG
Grid Convergence: .31°	
Total Correction: +7.36°	

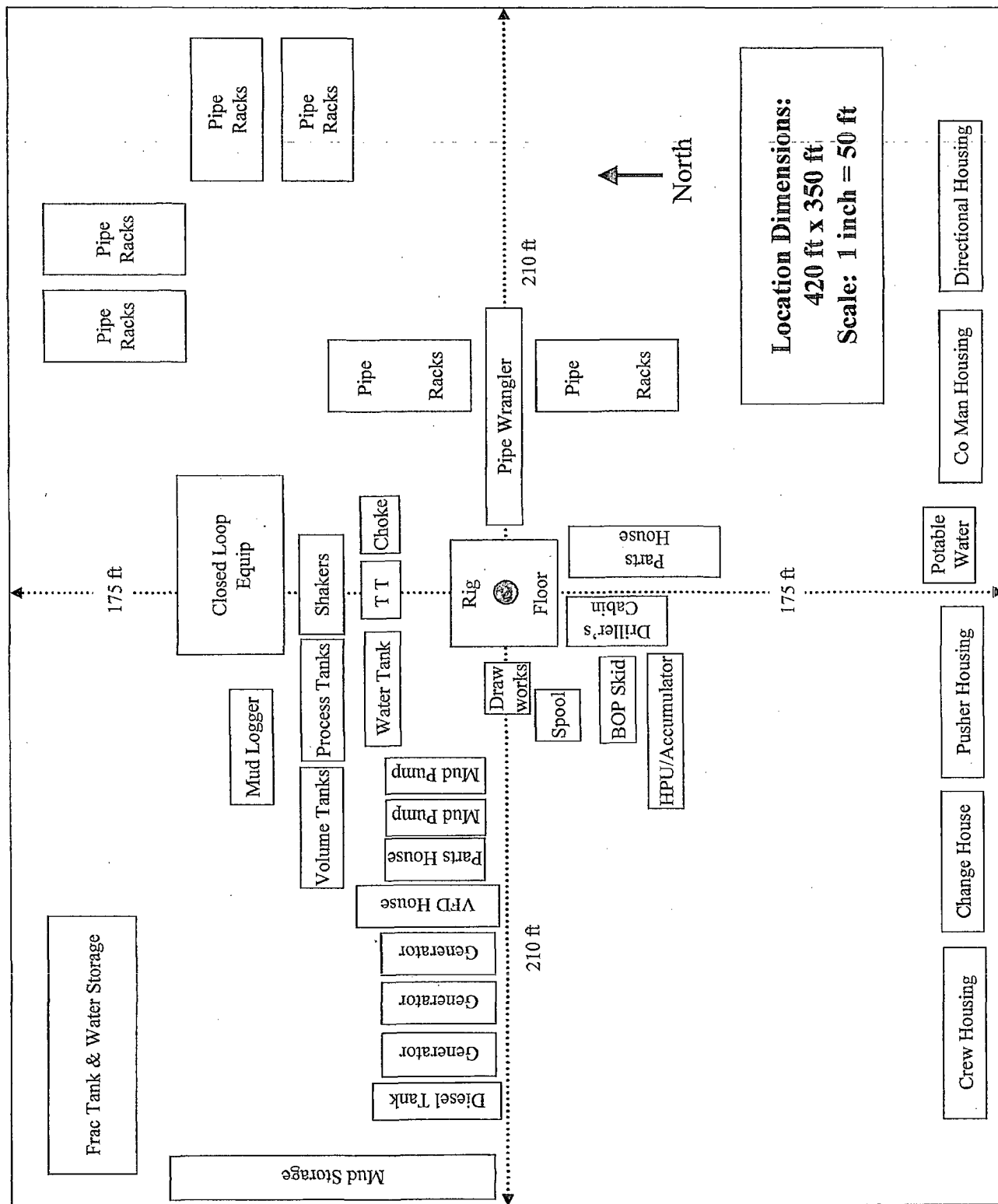
Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.18040° N	32° 10 min 49.431 sec
Longitude =	103.74216° W	103° 44 min 31.759 sec

Magnetic Declination =	7.67°	[True North Offset]	
Local Gravity =	.9988 g	Checksum =	6510
Local Field Strength =	48601 nT	Magnetic Vector X =	23996 nT
Magnetic Dip =	60.12°	Magnetic Vector Y =	3233 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z =	42140 nT
Spud Date =	May 15, 2011	Magnetic Vector H =	24213 nT

Signed: _____

Date: _____

H&P Flex Rig Location Layout



NOTES REGARDING BLOWOUT PREVENTERS

Devon Energy Production Company, LP

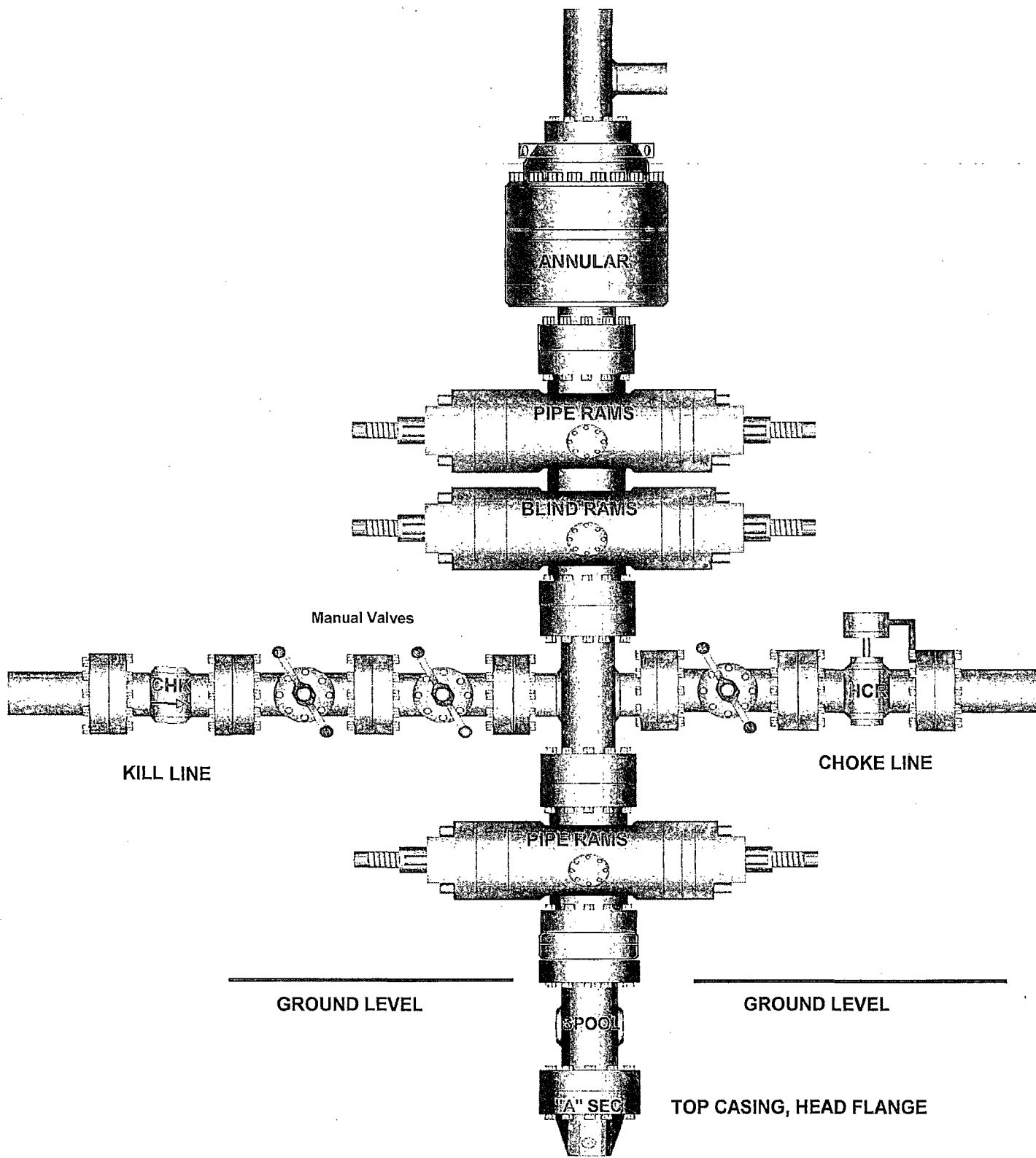
Cotton Draw Unit 156H

Surface Location: 200' FNL & 660' FEL, Unit A, Sec 35 T24S R31E, Eddy, NM

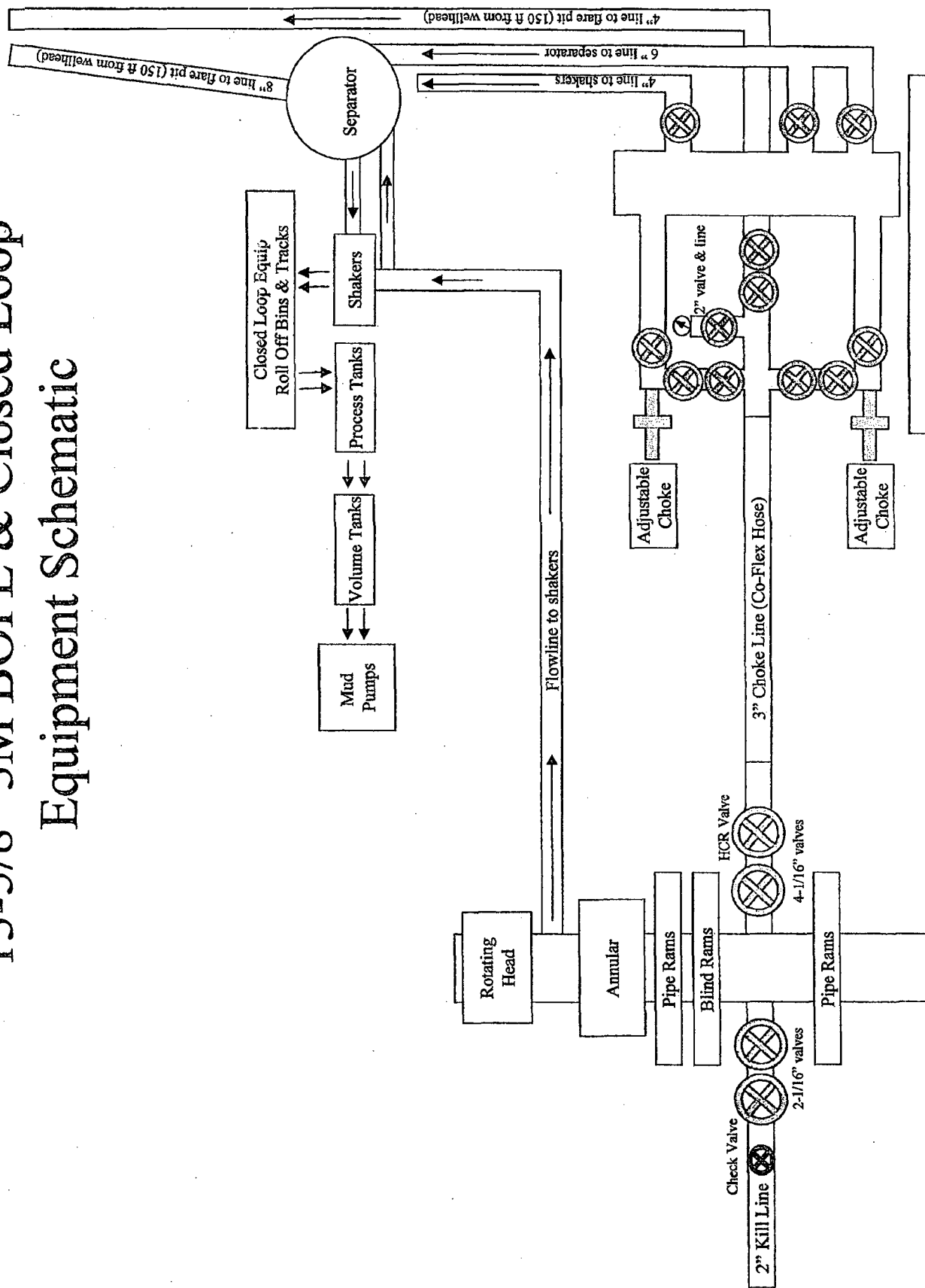
Bottom Hole Location: 200' FSL & 660' FEL, Unit P, Sec 35 T24S R31E, Eddy, NM

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 3,000 psi working pressure.
4. All fittings will be flanged.
5. A full bore safety valve tested to a minimum 3,000 psi WP with proper thread connections will be available on the rotary rig floor at all times.
6. All choke lines will be anchored to prevent movement.
7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
8. Will maintain a kelly cock attached to the kelly.
9. Hand wheels and wrenches will be properly installed and tested for safe operation.
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

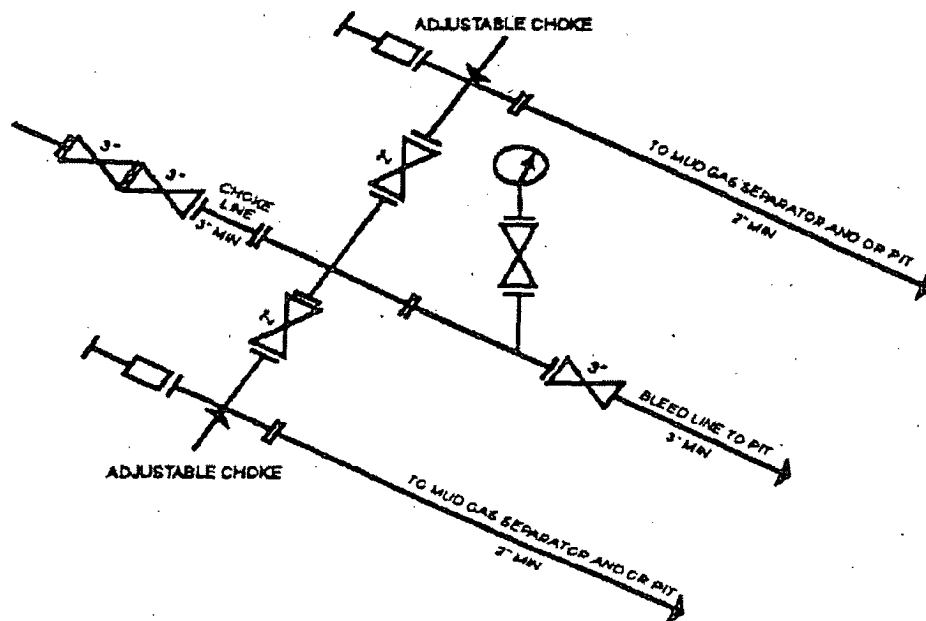
13-5/8" x 3,000 psi BOP Stack



13-5/8" 3M BOPE & Closed Loop Equipment Schematic



Note: all valves & lines on choke manifold are 3" unless otherwise noted. Exact manifold configuration may vary.



3M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY
 [54 FR 39528, Sept. 27, 1989]

Continental

Fluid Technology

ContiTech Beattie Corp.
Website: www.contitechbeattie.com

Monday, June 14, 2010

RE: Drilling & Production Hoses
Lifting & Safety Equipment

To Helmerich & Payne,

A Continental ContiTech hose assembly can perform as intended and suitable for the application regardless of whether the hose is secured or unsecured in its configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Production, we do offer the corresponding lifting and safety equipment, this has the added benefit of easing the lifting and handling of each hose assembly whilst affording hose longevity by ensuring correct handling methods and procedures as well as securing the hose in the unlikely event of a failure, but in no way does the lifting and safety equipment affect the performance of the hoses providing the hoses have been handled and installed correctly. It is good practice to use lifting & safety equipment but not mandatory.

Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

ContiTech Beattie is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

Best regards,

Robin Hodgson
Sales Manager
ContiTech Beattie Corp

ContiTech Beattie Corp,
11535 Brittmoore Park Drive,
Houston, TX 77041
Phone: +1 (832) 327-0141
Fax: +1 (832) 327-0148
www.contitechbeattie.com





QUALITY DOCUMENT

PHOENIX RUBBER

INDUSTRIAL LTD.

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Phone: (361) 456-4200 • Fax: (361) 217-2972, 456-4273 • www.taurusemerge.hu

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT N° 890	
PURCHASER: Phoenix Beattie Co				P.O. N° 1520FA-872	
PHOENIX ORDER N° 172232		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N° 34403		NOMINAL / ACTUAL LENGTH: 11,43 m			
W.P 68,96 MPa 10000 psi		T.P 103,4 MPa 15000 psi		Duration: 60 min.	
Pressure test with water at ambient temperature					
See attachment. (1 page)					
↑ 10 mm = 10 Mln. → 10 mm = 16 MPa					
COUPLINGS					
Type	Serial N°		Quality		Heat N°
3" coupling with 4 1/16" Flange end	1231/a 1228		AISI 4130		80751
			AISI 4130		47438
API Spec 16 C Temperature rate: "B"					
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT					
Date: 20. June. 2002.	Inspector		Quality Control PHOENIX RUBBER Industrial Ltd. Hose Inspection and Certification Dept.		

VERIFIED TRUE COPY
PHOENIX RUBBER O O

Neu!

